

Model Development Phase

Date	13 June 2025
Team ID	SWTID1749627644
Project Title	Human Resource Management: Predicting Employee Promotions using Machine Learning
Maximum Marks	6 Marks

Model Selection Report:

In the forthcoming Model Selection Report, various models will be outlined, detailing their descriptions, hyperparameters, and performance metrics, including Accuracy or F1 Score. This comprehensive report will provide insights into the chosen models and their effectiveness.

Model Selection Report:

Model	Description	Hyperparameters	Performance Metric (e.g., Accuracy, F1 Score)
Decision Tree Classifier	A tree-based model that splits data into branches based on feature thresholds to make decisions.	-	Accuracy: 93%
Random Forest Classifier	An ensemble of multiple decision trees that votes for the most frequent outcome.	-	Accuracy: 95%
KNN Classifier	A non-parametric algorithm that classifies	default	Accuracy: 89%

	based on the majority label of k-nearest neighbors.		
XGBoost Classifier	A powerful gradient boosting algorithm optimized for performance and speed.	default	Accuracy: 87%